

REMARKS

The Office Action dated March 26, 2007 has been received and carefully noted. The above amendments and the following remarks are submitted as a full and complete response thereto.

By this Amendment, claim 8 has been added. Support for new claim 8 can be found in at least Fig. 2 of the application as originally filed. No new matter has been added. Claims 1-8 are pending. Claim 6 has been allowed. Accordingly, claims 1-5, 7 and 8 are respectfully submitted for consideration.

Allowable Subject Matter

The Applicants wish to thank the Examiner for allowing claim 6.

Rejection Under 35 U.S.C. § 102

Claims 1, 2, 4 and 5 were rejected under 35 U.S.C. § 102(b) as being anticipated by Ishizaka et al. (U.S. Patent No. 5,510,803, "Ishizaka"). Claims 2, 4 and 5 depend from claim 1. The Applicants traverse the rejection and respectfully submit that claims 1, 2, 4 and 5 recite subject matter that is neither disclosed nor suggested by Ishizaka.

Claim 1 recites an on-board antenna comprising a radiation element provided on a dielectric substrate, a grounding conductor provided on the dielectric substrate and surrounding a periphery of an outer edge portion of the radiation element at a position spaced away outwardly from the outer edge portion. A conductive member is provided on the dielectric substrate at a position spaced away outwardly from an outer edge portion of the grounding conductor. The radiation element, the grounding conductor, and the conductive member are provided on the same surface of the dielectric substrate.

Ishizaka discloses, in Fig. 4, a dual-polarization planar antenna comprising a first feeding substrate 5 provided with first radiation patch elements 3' for radiating a plurality of circularly polarized waves and a first feeding line 4, a first dielectric member 2, a first ground conductor 1 having a plurality of slots 12, a second dielectric member 6, a second feeding substrate 9 provided with second radiation patch elements 7' for radiating a plurality of circularly polarized waves and a second feeding line 8, a third dielectric member 10, and a second ground conductor 11. These components are successively superposed in this order, as illustrated in the figure. See column 5, lines 45-56 of Ishizaka.

With respect to claim 1, the Applicants respectfully submit that Ishizaka fails to disclose or suggest the claimed features of the invention. Claim 1 recites a grounding conductor provided on the dielectric substrate and surrounding a periphery of an outer edge portion of the radiation element at a position spaced away outwardly from the outer edge portion and that the radiation element, the grounding conductor, and the conductive member are provided on the same surface of the dielectric substrate. The Office Action asserted that the second radiation patch 7' was comparable to the claimed grounding conductor. In contrast, Ishizaka discloses that the second radiation patch 7' merely surrounds the first radiation patch 3'. There is no disclosure or suggestion that the second radiation patch 7' in Ishizaka is grounded and is a grounding conductor, as recited in claim 1.

In addition, Ishizaka does not disclose or suggest a conductive member provided on the dielectric substrate at a position faced away outwardly from an outer edge portion of the grounding conductor. The Office Action asserted that the first ground

conductor 1 in Ishizaka was comparable to the claimed conductive member. However, the first ground conductor 1 in Ishizaka is not disclosed as being “at a position spaced away outwardly from an outer edge portion” of any element that may arguably be comparable to the claimed grounding conductor. As such, Ishizaka does not disclose or suggest at least the claimed conductive member provided on the dielectric substrate at a position spaced away outwardly from an outer edge portion of the grounding conductor, as recited in claim 1.

Further, Ishizaka does not disclose or suggest that the radiation element, grounding conductor and the conductive member are provided on the same surface of the dielectric substrate. The Office Action asserted that “the radiation element (3'), the grounding conductor (7'), and the conductive member [(1)] are provided on the same surface of the dielectric substrate (6 and 9)”. See page 2, lines 18-20 of the Office Action. However, the first radiation patch 3' in Ishizaka, asserted as comparable to the claimed radiation element, is disposed on a first dielectric member 2, the second radiation patch 7', asserted as comparable to the grounding conductor, is disposed on a second feeding substrate 9 which has a different surface from that of the first dielectric member 2. Also, the first ground conductor 1 in Ishizaka, asserted as comparable to the conductive member 12, is disposed on a second dielectric member 6 which is a different surface from the second feeding substrate 9 and the first dielectric member 2. As such, each of the first radiation patch element 3', second radiation patch element 7' and first ground conductor 1 is disposed on different and separate surfaces, not on the same surface as required by claim 1. See Fig. 4 of Ishizaka. As such, Ishizaka fails to disclose or suggest each and every feature of the invention as recited in claim 1.

To qualify as prior art under 35 U.S.C. § 102, each and every feature recited in a rejected claim must be disclosed by the applied art. Accordingly, as Ishizaka does not disclose or suggest the features of the invention, Ishizaka does not anticipate claim 1, nor is claim 1 obvious in view of Ishizaka. Therefore, the Applicants submit that claim 1 is allowable over Ishizaka. As such, the Applicants respectfully request withdrawal of the rejection of claim 1.

Rejection Under 35 U.S.C. § 103

Claim 3 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishizaka in view of Harada (U.S. Patent No. 5,124,714). Ishizaka was cited for disclosing many of the claimed elements of the invention with the exception of the conductive member being of a circular shape. Harada was cited for curing this deficiency.

Harada discloses a dual slot planar mobile antenna fed with coaxial cables in which a first closed-circle slot 21 is provided between a peripheral conductor or peripheral conducting surface 10 and a first central conductor or first central conducting surface 11, and a second closed-circle slot 22 is provided between the first central conductor 11 and the second central conductor or second central conducting surface 12. See column 2, lines 12-18 of Harada.

Claim 3 depends from claim 1. As discussed above, Ishizaka does not disclose or suggest the features of the invention as recited in claim 1. The Applicants respectfully submit that Harada fails to cure the deficiencies in Ishizaka with respect to claim 1, as Harada also does not disclose the grounding conductor provided on the dielectric substrate and a conductive member provided on the dielectric substrate at a

position spaced away outwardly from an outer edge portion of the grounding conductor, wherein the radiation element, the grounding conductor and the conductive member are provided on the same surface of the dielectric substrate, as recited in claim 1. Therefore, the combination of Ishizaka and Harada fails to disclose or suggest the features of the invention as recited in claim 1, and therefore, dependent claim 3.

To establish a *prima facie* case of obviousness, each and every feature of a rejected claim must be taught or suggested by the applied art of record. See MPEP § 2143.03.

In view of the above, the Applicants respectfully submit that the Office Action has failed to establish a *prima facie* case of obviousness for purposes of a rejection of claim 3 under 35 U.S.C. § 103.

New Claim 8

New claim 8 is based on claim 1 and additionally recites the feature of the radiation element, the grounding conductor, and the conductive member are provided directly on the dielectric substrate on the same surface thereof. The Applicants respectfully submit that the cited references, either singly or in combination do not disclose or suggest this feature of the invention.

Conclusion


As noted above, claim 6 is allowed. The Applicants respectfully submit that claims 1 and 8 are allowable. Claims 2-5 and 7 depend from claim 1. The Applicants further submit that each of these claims incorporate the patentable aspects thereof, and are therefore allowable for at least the same reasons as discussed above. Accordingly,

the Applicants respectfully request withdrawal of the rejections, allowance of claims 1-5, 7 and 8 and the prompt issuance of a Notice of Allowability.

Should the Examiner believe anything further is desirable in order to place this application in better condition for allowance, the Examiner is requested to contact the undersigned at the telephone number listed below.

In the event this paper is not considered to be timely filed, the Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, **referencing Attorney Dkt. No. 107355-00100.**

Respectfully submitted,



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